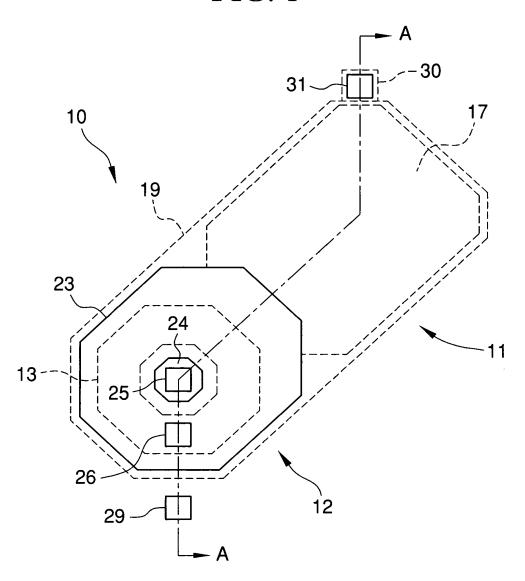
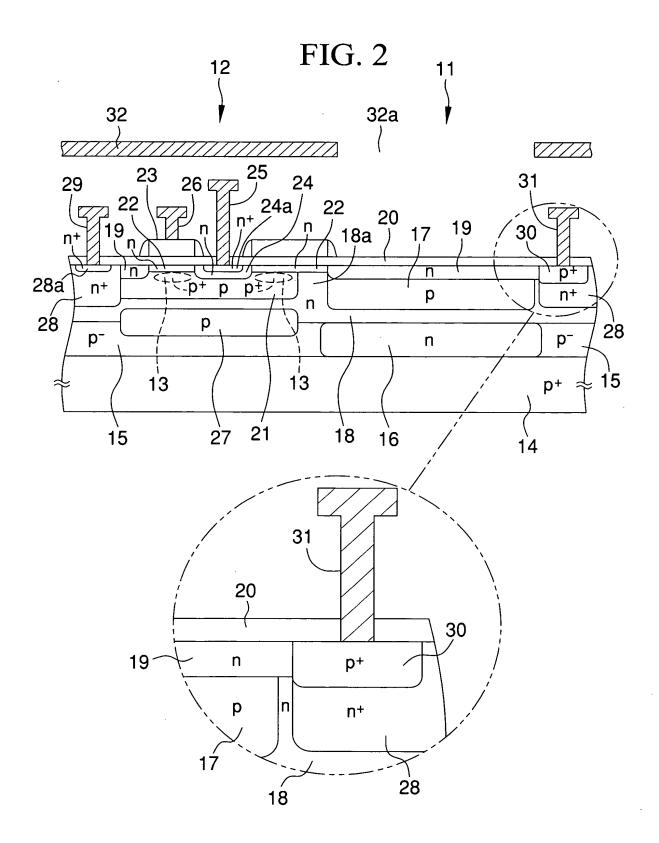
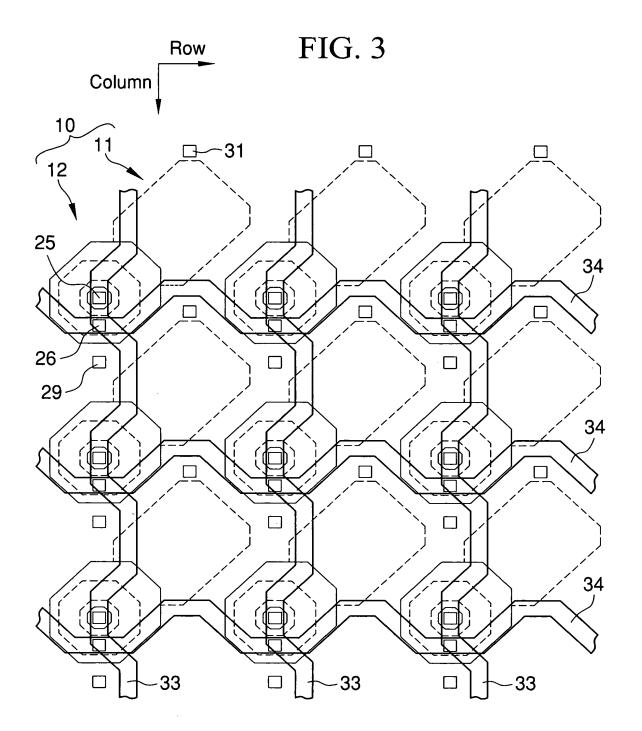
FIG. 1







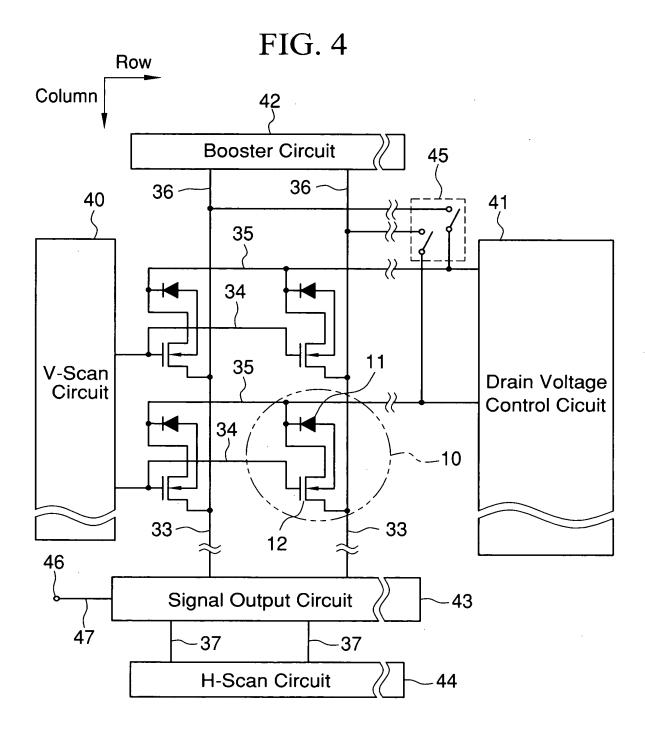


FIG. 5 Start Select All Horizontal Lines -S1 Transfer Charges in -S2 Photo Diodes to HPK Eliminate Charges in HPK to Substrate Start Exposure Accumulate Photo-Generated **S5** Charges in Photo Diodes Transfer Charges to HPK -S6 No Exposure Time Has Passed? -S7 Yes Select 1st Horizontal Line Readout Source Potential (VoutS) Eliminate Charges in HPK to Substrate Readout Source Potential (VoutN) S11 **Output Signal Vout** -S12 (Vout = VoutS - VoutN)Last Horizontal Line? -S13 Yes

End

FIG. 6

;	Transfer (S2)	Elimination (S3)	
Gate (Vg)	0.0V	8.0V	
Drain (Vd)	6.0V	6.0V	
Source (Vs)	1.2V	6.0V	
HSCAN	0.0V	0.0V	
Vout	0.0V	0.0V	

FIG. 7

<u>'</u>	Accumulation (S5)	Transfer (S6)	
Gate (Vg)	3.3V	0.0V	
Drain (Vd) 	1.2V	6.0V	
Source (Vs)	1.2V	1.2V	
HSCAN	0.0V	0.0V	
Vout_	0.0V	0.0V	

FIG. 8

}	Horizontal Blanking Period		
	Readout (S9)	Elimination (S10)	Readout (S11)
Selected Gate (Vg ₁)	3.3V	8.0V	3.3V
Non-Selected Gate (Vg ₂)	0.0V	2.0V	0.0V
Drain (Vd)	3.3V	6.0V	3.3V
Source (Vs)	VoutS	6.0V	VoutN
HSCAN	0.0V	0.0V	0.0V
Vout	0.0V	0.0V	0.0V

FIG. 9

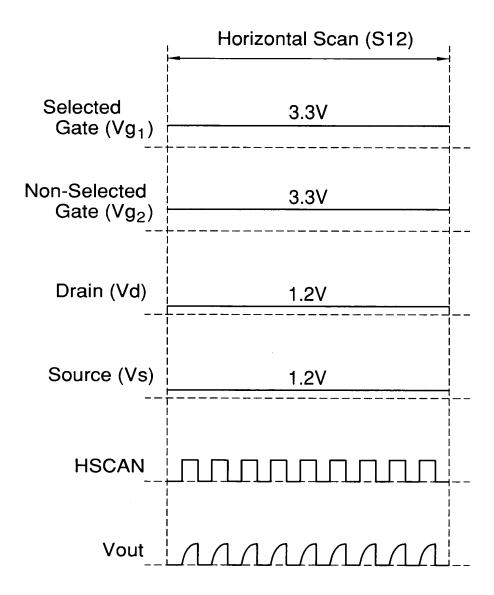
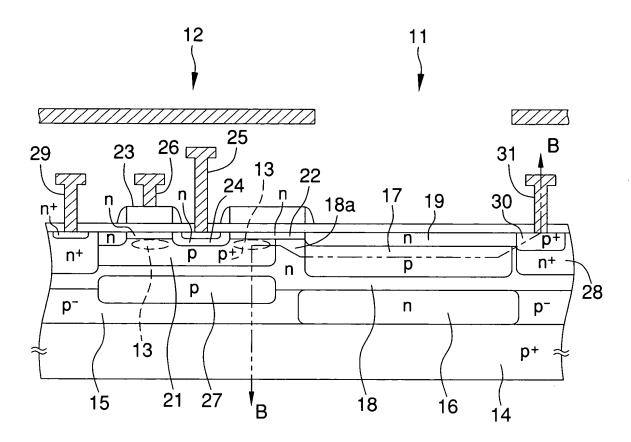
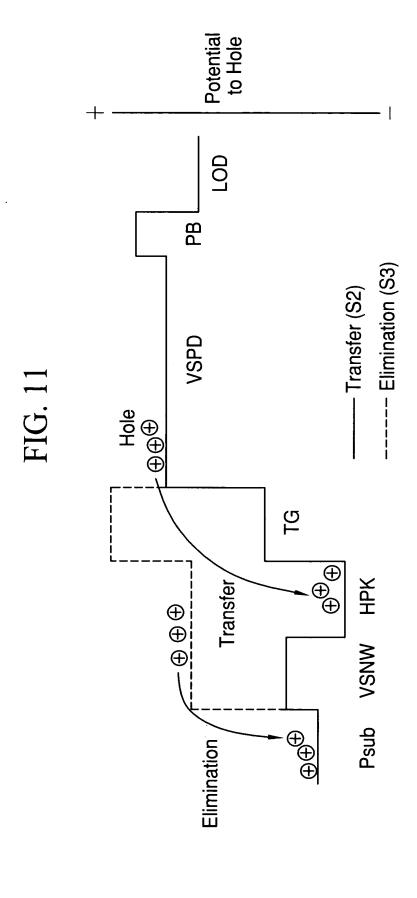
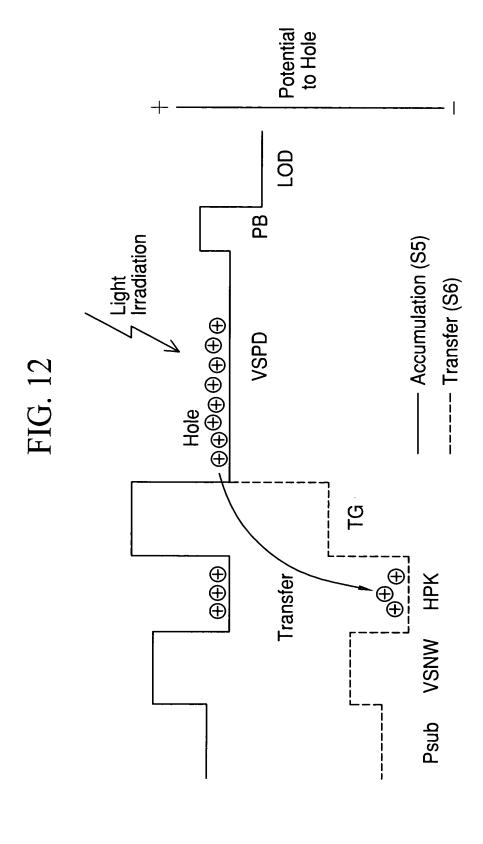
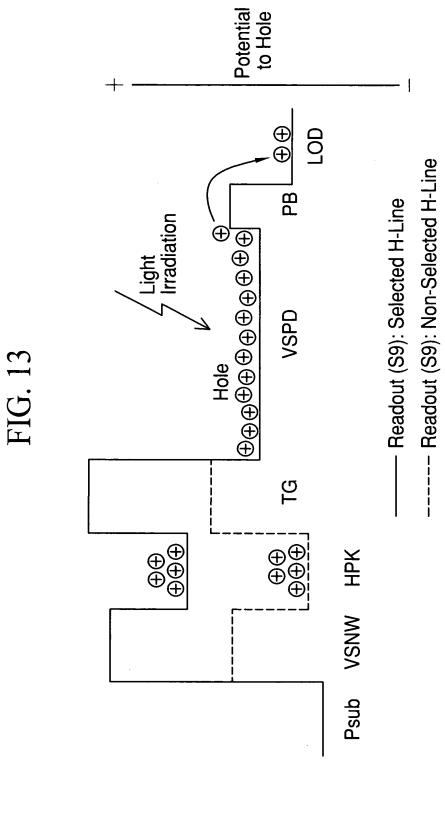


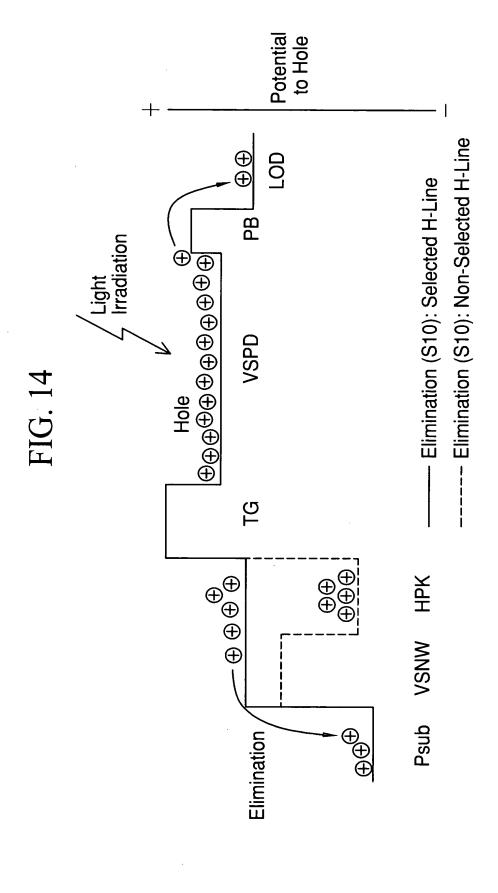
FIG. 10



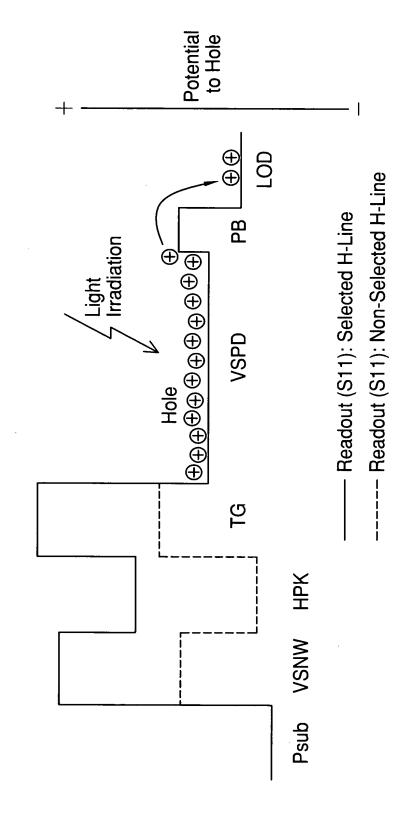












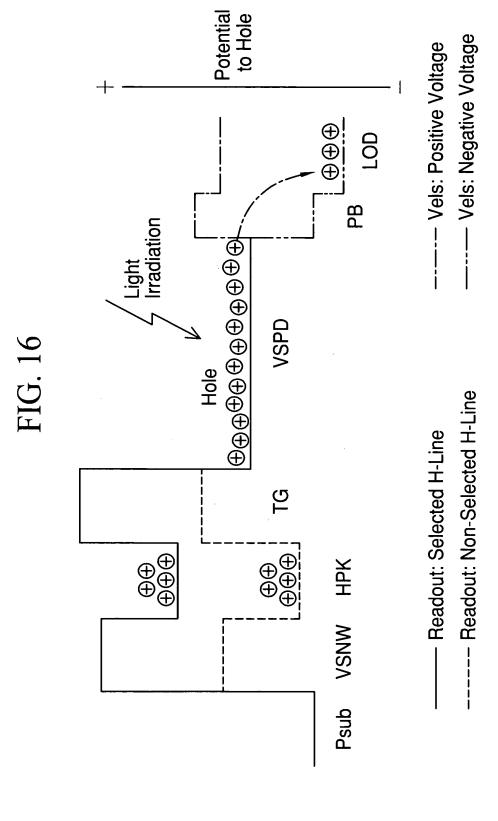


FIG. 17A

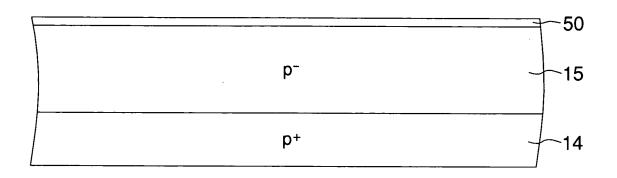


FIG. 17B

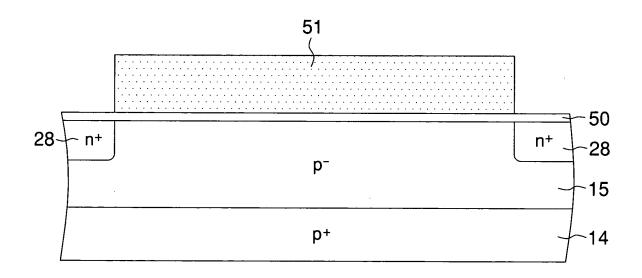


FIG. 18A

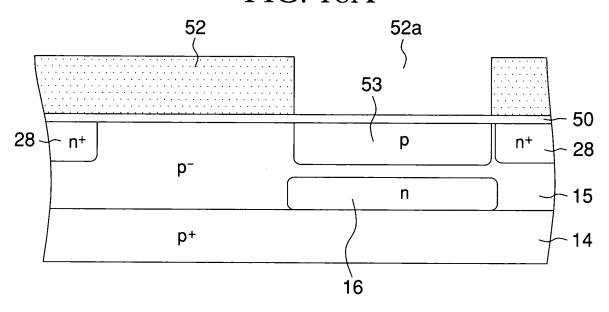


FIG. 18B

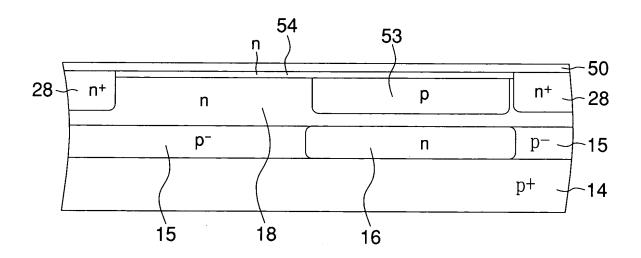


FIG. 19A

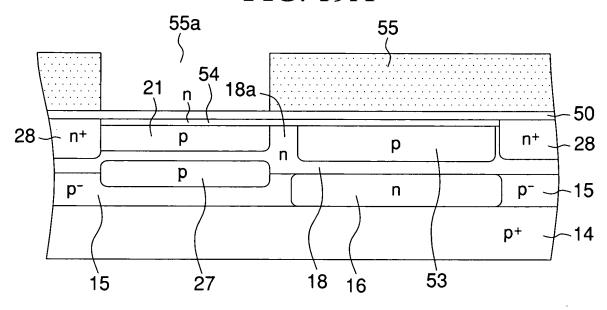


FIG. 19B

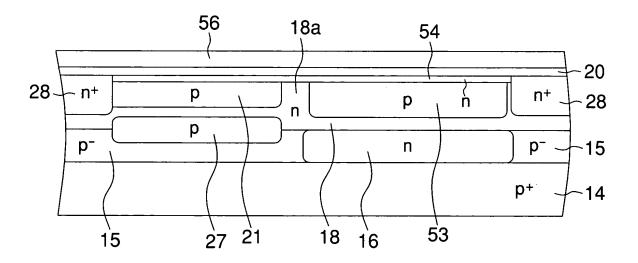


FIG. 20A

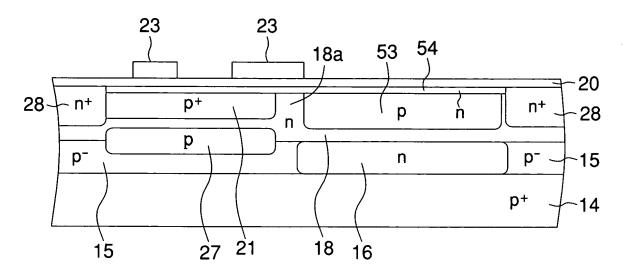


FIG. 20B

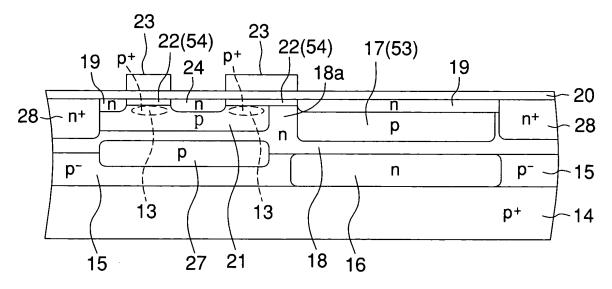


FIG. 21A

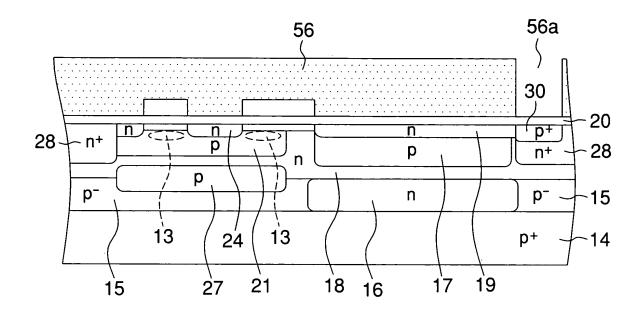


FIG. 21B

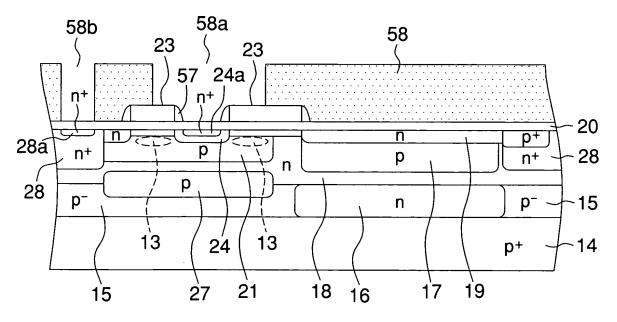


FIG. 22

